REMARKS

The application has been amended and is believed to be in condition for allowance.

A Petition to Revive is being filed concurrently with this amendment.

A replacement Abstract is attached.

Specification section headings have been added.

As requested by the Official Action, an English-language translation of JP 10216361 is attached.

Claim 15 now clearly depends from claim 4 and recites "at least some events, which will happen during the real competition, are stored as separate image data in said memory respectively CD, such that these images can be displayed at suitable time moments during the simulated competition". This recitation further limits claim 4.

The "back referring claims" has been removed from claim 15.

The claims have been amended responsive to the indefiniteness rejection. Withdrawal of this rejection is solicited.

Claim 1 has been amended to include original claim 11.

Thus, the relevant rejection is to claims 11-13 as having been rejected by KHOSLA 6,080,063 in view of MYERS 5,921,780.

Applicant respectfully disagrees.

Page 13 of the Official Action acknowledges that KHOSLA does not teach an environment database in which data about a number of possible competition environments are stored so that, after the specific environment where the competition will be held is known, the simulation of said environment can be adapted to the choice of the real environment.

On page 13 of the Official Action, it is stated that "it would be necessitated through obviousness that such a database instance to be present to create the virtual 3D model from the GPS data received (KHOSLA: Col. 7 Lines 61-67)."

> remote computer system **140**.
>
> Remote computer system **140** uses the position information to construct a three-dimensional representation of the real vehicles in the race. A display **380** of the driver's view is constructed by taking a projection of this three dimensional model from the perspective of a driver located in a simulated vehicle. Only vehicles directly within the simulated driver's view are visible in display **380**.

The relied-upon passage is reproduced above. This passage teaches using GPS to obtain information as to construct a 3D representation of real vehicles in the race so that a display of the driver's view may be constructed with only vehicles directly within the simulated driver's view being visible in the display.

This makes sense when one recalls that the KHOSLA invention is a game play system that allows remote players to participate in a concurrent simulation of a live event as the live event is occurring. The system gathers input from sensors

located at the live event, preprocesses this input, and transfers it to a computer system, which uses this input to create a concurrent simulation of the live event. A remote game player can then interact with the concurrent simulation by providing input to the concurrent simulation through a user interface. This system combines the excitement of a highly interactive video game with the drama and publicity surrounding a live event. See the KHOSLA Abstract.

What KHOSLA teaches is how to have a remote player participate in a live event, by using data gathered from that live event. See, e.g., column 5, line 66 to column 6, line 12, which specifies that the display contains entities representing simulated participants and live participants. Furthermore, column 6, lines 49-60 clearly teaches that a television signal is transmitted, which excludes the possibility of a generated (simulated) environment.

distributed computing system.

FIG. **5** is a flowchart illustrating how live event simulation **150** operates according to one embodiment of the present invention. At step **500**, computer system **140** (illustrated in FIG. **3**) generates a display **380** of live event **100**, which is viewed by player **160**. At step **5 10**, live event simulation **150** gathers "event" input from live event **100** through sensors **110**. At step **520**, this event input is used to modify display **380** to properly reflect the current state of live event **100**. At step **530**, computer system **140** receives "user" input from player **160**. At step **540**, this user input is used to update display **380** to reflect the effect of user commands on live event simulation **150**.

FIG. **5** illustrates one possible ordering of steps **500**, **510**,

This live environment aspect of KHOSLA is further clear from column 7, lines 15-25 which explicitly discloses that only computer-generated images of simulated participants are mixed with a live video feed from live event 100.

> According to one embodiment of the present invention, two types of interactions are regulated by live event simulation **150**: (1) interactions between simulated participants; and (2) interactions between real participants and simulated participants. A game designer has great flexibility is specifying rules governing interactions between simulated participants, because live event simulation **150** has complete control over the actions and reactions of simulated participants. However, a game designer has less flexibility in specifying rules governing interactions between real participants and simulated participants, because live event **100** proceeds completely independently of the simulated participants. Consequently, real participants from live event **100** cannot "react" to actions of the simulated participants without deviating the from live event **100**. Nevertheless, limited forms of interaction between simulated and real participants can be imbedded in live event simulation **150**. For example, in a simulation of an automobile race, a simulated vehicle may be obliged to give way to let a real vehicle pass, and collisions between simulated vehicles may not be allowed to affect real vehicles.

From the above, it is clear that KHOSLA does not require an environment database since KHOSLA relies on the live feed to place the player into a live event.

MEYERS discloses a racecar simulator providing a realistic simulation of a racecar in the sense of visual and auditory stimuli and physical forces. In the entire document, only the simulation of a racecar even is disclosed. MEYERS makes no disclosure with respect to racetrack selection and sensor data of a live event.

There is no teaching in either applied reference to use environment database information in simulating events in a real environment containing static objects and dynamic objects. The references do not teach combining position locating, in the real environment, the position of dynamic objects in relation to static objects in real time so as to both indicate at a certain moment the mutual positions of the static and dynamic objects of the environment, and then reference an environment database so that the simulation of game environment can be adapted to the choice of the real environment.

There is simply no motivation for the combination proposed by the Official Action.

The present rejection arises from improper application of hindsight. The analysis is not whether the prior art had the technology to achieve the invention, but rather, the invention is taught or suggested by the relevant prior art, taking into account what the reference being modified was intended to do.

Numerous Federal Circuit decisions emphasize that obviousness rejections over a combination of elements found in two or more prior art references are improper unless the prior art suggests their combination. *E.g. McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) (" 'the central question is whether there is reason to combine [the] references,' a question of fact drawing on the *Graham* factors"); *In re Kotzab*, 208 F.3d 1365, 1370, 54 USPQ2d

1308, 1316 (Fed. Cir. 2000) ("to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.").

In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is a rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.") ("The range of sources available [to show a suggestion, teaching, or motivation to combine], however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular."

"When the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why of the reference teachings are proper." *Ex parte Skinner*, 2 USPQ2d 1788, 1790 (Bd. App. & Int'f 1986), *see also Ex parte* Clapp, 277 USPQ 972, 973 (Bd. App. & Int'f 1985) (noting that, to support obviousness, "either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line or reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the

references. . . . [S]implicity and hindsight are not proper criteria for resolving the issue of obviousness.")

The Examiner has not satisfied these requirements.

As to KHOSLA, there is no requirement for an environment database, and absent such requirement, there is no motivation for the proposed combination.

Reconsideration and allowance of all the claims are respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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REL/lk

Appendix:

The Appendix includes the following items:

- a new Abstract of the Disclosure
- English-language translation of JP 10216361

JP,10-216361,A]
CLAIMS

[Claim(s)]
[Claim 1] Have two or more game equipments, and said game equipment divides and plays a match against two or more groups. It is the game system which reports a reaction condition according to the contents of advance of a game at least. Said game equipment A location detection means to detect the location of game equipment, and a program store means to memorize the game program of the contents which took in the location of game equipment to the game element, A display means to display information, and the control means which advances a game while reading a game program from a program store means and displaying the contents of a game on a display means, While performing control which associates and displays the location of game equipment on the contents of a game displayed on a display means A game change means to change advance of a game according to the location of game equipment, An area setting means to set up the reaction area which is the reaction area reacted to game equipment, and is what produces the effectiveness that this reaction area has two or more kinds of area where setting area differs, and each differs, The game system characterized by having a reaction command means to react if game equipment goes into said reaction area, and to order it the information of a predetermined reaction condition.
[Claim 2] Said location detection means is a game system according to claim 1 characterized by being GPS equipment which receives the electric wave for positioning from a GPS Satellite, and measures the current position of game equipment.
[Claim 3] It is the game system according to claim 1 characterized by said two or more groups being divided into an enemy and an ally with game equipment, and being pitched against each other, said area setting means setting up the attack area which attacks an enemy, for said reaction command means attacking the enemy concerned if an enemy goes into said attack area, and ordering an ally the display of an enemy's invasion condition.
[Claim 4] It is the game system according to claim 1 which said two or more groups form the referee equipment which supervises a waging-war situation while being divided into an enemy and an ally with game equipment and being pitched against each other, and is characterized by equipping said referee equipment with a referee means to perform referee processing of waging war.
[Claim 5] The reaction area set up by said area setting means It is that from which the area of one point consists of multiplex area, and the effectiveness in each area differs. Said reaction command means Will react, if game equipment goes into multiplex area, and corresponding to each area, it is ordered the information of a count or a display. the game equipment which is present in the multiplex area concerned when game equipment goes into specific area -- receiving -- effectiveness -- and the game system according to claim 1 characterized by performing processing which counts or displays the effectiveness.
[Claim 6] The reaction area set up by said area setting means is a game system according to claim 1 characterized by including the area which will not re-react to game modification once it reacts.
[Claim 7] The reaction area set up by said area setting means is a game system according

to claim 1 characterized by setting modification being possible on condition that predetermined [, such as time amount,].
[Claim 8] The game system according to claim 1 characterized by having the re-reaction means for stopping it is made not to react even if game equipment will go into the reaction area continuously, once it reacts to the reaction area set up by said area setting means.

[Translation done.]
DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to a game system. In detail Location detection equipment Using the location detection information on (for example, a GPS receiving set) A game It is related with the game system which performs (for example, a game, such as effectiveness arising and displaying if it is divided into an enemy and an ally, the reaction area (for example, the mine effectiveness for an attack) which produces predetermined effectiveness is set up and it goes into reaction area (it displaying only on an ally), or carrying out death from explosion of the enemy).
[0002]
[Description of the Prior Art] Recently, various kinds of things are developed by that even both small children, and schoolboys or members of society can enjoy themselves, and a game device is sold, and has spread. However, it is almost the case which all copies the contents of a game to display units, such as CRT, indoors, and performs a game. On the other hand, as leisure in the outdoors, orienteering and a field game are performed in many cases, and these are considered to be healthier than indoor play in order to move the body. Moreover, the navigation equipment which receives the signal (electric wave for positioning) sent from three or more GPS Satellites, measures its location (LONG, LAT, altitude) in land, marine, and the air, reads the map information about a current point from CD-ROM, and is displayed on a screen attracts attention. This navigation equipment is made by the key objective in automatic induction of a car etc., and is hardly used for other purposes of a game.
[0003]
[Problem(s) to be Solved by the Invention] If it was in conventional game equipment, there were the following troubles.
(1) Most was not the thing of the kind of copying the contents of a game on the screen of a display unit indoors, enjoying a game, moving the body, and performing a game, and conventional game equipment did not have it. [healthy]
(2) Moreover, conventional game equipment had the trouble that there was much what performs a game by one person, and it lacked in humane contact.
[0004] (3) Although there are some which perform a battle game or a fighting game by two persons also in conventional game equipment, equipment to which neither performs a game on a scale of several persons, and performs a game by many numbers to a slight degree by this point is desired.
(4) In what copies the contents of a game on the screen of a display unit indoors, and enjoys a game, recently, it is in the inclination which the contents of a game mannerism-

ize, and enjoyment was missing.
(5) On the other hand, when a game was performed out in the fields, the thing of acquiring simply a means to check one's location, making it reflected in a game or making advance of a game assist lacked in the element which there is no former, is this point and heaps up a field game.
[0005] Then, this invention can advance the game of the contents which took in a game participant's self-location to the game element, and aims at offering the game system which can make the contents of a game interesting while it can perform a game out in the fields.
[0006]
[Means for Solving the Problem] In order to attain the above-mentioned purpose, a game system according to claim 1 Have two or more game equipments, and said game equipment divides and plays a match against two or more groups. It is the game system which reports a reaction condition according to the contents of advance of a game at least. Said game equipment A location detection means to detect the location of game equipment, and a program store means to memorize the game program of the contents which took in the location of game equipment to the game element, A display means to display information, and the control means which advances a game while reading a game program from a program store means and displaying the contents of a game on a display means, While performing control which associates and displays the location of game equipment on the contents of a game displayed on a display means A game change means to change advance of a game according to the location of game equipment, An area setting means to set up the reaction area which is the reaction area reacted to game equipment, and is what produces the effectiveness that this reaction area has two or more kinds of area where setting area differs, and each differs, It will react, if game equipment goes into said reaction area, and it is characterized by having a reaction command means to order it the information of a predetermined reaction condition.
[0007] Moreover, it may consider as a desirable mode, for example, you may make it be GPS equipment according to claim 2 which said location detection means receives the electric wave for positioning from a GPS Satellite like, and measures the current position of game equipment.
[0008] For example, the attack area according to claim 3 said whose area setting means said two or more groups are divided into an enemy and an ally with game equipment, and are pitched against each other, and attacks an enemy like is set up, and if an enemy goes into said attack area, said reaction command means attacks the enemy concerned, and you may make it order an ally the display of an enemy's invasion condition.
[0009] For example, the referee equipment according to claim 4 which supervises a waging-war situation like while said two or more groups are divided into an enemy and an ally with game equipment and are pitched against each other was formed, and you may make it said referee equipment equipped with a referee means to perform referee processing of waging war.
[0010] For example, the reaction area according to claim 5 set up by said area setting means like It is that from which the area of one point consists of multiplex area, and the effectiveness in each area differs. Said reaction command means Will react, if game equipment goes into multiplex area, and corresponding to each area, it is ordered the information of a count or a display. When game equipment goes into specific area,

effectiveness reaches to the game equipment which is present in the multiplex area concerned, and it may be made to perform processing which counts or displays the effectiveness.
[0011] For example, once the reaction area according to claim 6 set up by said area setting means like reacts, you may make it include the area which does not re-react to game modification.
[0012] For example, setting modification is possible for the reaction area according to claim 7 set up by said area setting means like on condition that predetermined [, such as time amount,], and it is good to also make.
[0013] For example, once it reacts to the reaction area according to claim 8 set up by said area setting means like, you may make it have the re-reaction means for stopping it is made not to react even if game equipment goes into the reaction area continuously.
[0014]
[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained with reference to a drawing as one example of the game system which consists of two or more game equipments which perform a battle game.
A. The appearance block diagram 1 of game equipment is drawing showing the appearance configuration of the referee machine which realizes the game system concerning this invention, a hostile aircraft, and an ally machine. In drawing 1 , 1 is [the ally machine (game equipment) of plurality (this example three sets), and 12a-12c of one set (referee equipment) of a referee machine, and 11a-11c] the hostile aircrafts (game equipment) of plurality (this example three sets). The referee machine 1 judges a game and has the GPS antenna 21, a communications antenna 22, a display unit 23, and the switch input section 24 as a part which is outside visible.
[0015] It has the GPS antenna 41, a communications antenna 42, a display unit 43, and the switch input section 44 as a part the participant in a game carries the ally machines 11a-11c (it represents with the number of 11 suitably hereafter) as allies, and they appear outside. Moreover, the participant in a game carries hostile aircrafts 12a-12c (it represents with the number of 12 suitably hereafter) as methods of an enemy, and the exterior has the same configuration (however, a part of internal processing differs so that it may mention later) as the ally machine 11. Thus, in the game system of this example, a battle game advances with one set of the referee machine 1, and the ally machines 11a-11c and hostile aircrafts 12a-12c which it divided into three sets at a time. In addition, the number of the ally machine 11 or a hostile aircraft 12 may be not only 3 but other number, respectively.
[0016] B. Explain the block configuration of the referee machine 1 to block style Shigeji of a referee machine with reference to drawing 2 . In drawing 2 , the referee machine 1 is constituted including the GPS antenna 21, the GPS receiving set 25, a communications antenna 22, a transmitter-receiver 26, a control section 27, ROM28 and RAM29, the CD-ROM driver 30, the switch input section 24, a display unit 23, and an audio output device (for example, loudspeaker) 31. The microstrip patch antenna using a Teflon substrate which has semi-sphere-like directivity mostly is used, and the GPS antenna 11 is attached in the upper part of the referee machine 1 in order to receive about 1.5MHz dextrorotation circularly-polarized-wave signal sent from a GPS Satellite. Through the GPS antenna 21, the GPS receiving set (location detection means) 25 receives the electric wave for positioning from two or more GPS Satellites, gets over, and outputs the

currency information which computed and computed the currency information (for example, positioning information on the three dimensions containing the LAT, LONG, and altitude) of the referee machine 1 based on the recovery signal to a control section 27.

[0017] GPS (Global Potioning System) is a worldwide electric-wave positioning system using a satellite, by arranging 24 satellites [four] at each six orbital planes, respectively, it can receive the electric wave from each satellite theoretically, can compute the distance of a satellite and a receiving point from the time of concentration, and, finally can ask for three-dimensions positioning (the LAT, LONG, altitude) of a receiving point. In this case, the referee machine 1 with which the current position is detected by the GPS receiving set 25 is equivalent to a mobile. In addition, those (namely, human being) who generalize a game treat the referee machine 1. As a referee machine 1, commercial car navigation equipment, a game machine, a personal computer, etc. may be used (for example, the format of equipping with reconstruction or an optional equipment is sufficient), or it may be manufactured as a main phone of dedication.

[0018] The information signal transmitted from the ally machine 11 and the hostile aircraft 12 (each of these opportunities are hereafter called game machine collectively suitably) is received, or it is for communicating the information on transmitting required information to game machines 11 and 12 from the referee machine 1 etc., for example, an almost indirectional vertical antenna is used, and the communications antenna 22 is attached in the upper part of the referee machine 1. It transmits a signal to the game machines 11 and 12 which modulate the information sent from a control section 27 to game machines 11 and 12, and correspond through a communications antenna 22 while a transmitter-receiver 26 receives the signal from game machines 11 and 12, gets over through a communications antenna 22 and outputs the information for a game to a control section 27. In this case, there is information which expresses each current position of each game machines 11 and 12 with three-dimensions positioning (the LAT, LONG, altitude) in the signal received from game machines 11 and 12.

[0019] A control section 27 performs control which displays similarly the current position of each game machines 11 and 12 on the screen of a display unit 23 based on the positional information from two or more game machines 11 and 12 received by the transmitter-receiver 26 while performing control displayed on the screen of a display unit 23 corresponding to the game map data which read the current position of the referee machine 1 from CD-ROM32 through the CD-ROM driver 30 based on the currency information outputted from the GPS receiving set 25.

[0020] Moreover, a control section 27 performs referee processing about a game as a referee. Although the corresponding game machines 11 and 12 need to return to a start point when the mine which supervises action of each game machines 11 and 12, and is in the advance root with referee processing here is stepped on The processing which supervises and acts as the monitor of the action of the game machines 11 and 12 not returning on a screen, supervising the score of each game machines 11 and 12 **** -- etc. -- it is the thing of processing required in order to generalize the whole game until six sets of game machines 11 and 12 participate in a game and they reach gall (or omission) and to make a fair referee judgment.

[0021] Furthermore, a control section 27 synthesizes voice based on the voice data read from CD-ROM32, and is outputted to an audio output device 32 while it performs control

(for example, expansion of a screen, modification of display area, etc.) which changes screen information of a display unit 23 while performing required setting processings (for example, setup of an enemy and the number of allies etc.) based on the actuation signal of the switch input section 24. A control section 27 is constituted by the microcomputer containing CPU, and performs the above-mentioned control according to the control program (refer to the below-mentioned flow chart) stored in ROM28. A control section 27 and the CD-ROM driver 30 constitute a control means. Moreover, a control section 27 constitutes a game change means, a reaction command means, and a referee means.
[0022] The switch input section 24 changes the game map information displayed as the actuation key for performing game actuation (for example, actuation, setting actuation of a mine, etc. of issuing a restart command) on the screen of a display unit 23, or is constituted including the modification key for making a change of the game number of machines etc., other power-source keys, etc. In addition, the area which can battle a game machine is stored in CD-ROM32 beforehand driven with the CD-ROM driver 30, and assignment of the point on the battle area stored is attained by the coordinate.
[0023] ROM28 stores beforehand the various programs and the required data for the control of a game system performed by the control section 27. RAM29 has the memory area which stores the information which it is inputted from the switch input section 24, and must be memorized temporarily, and the memory area which stores temporarily the number information on the game machines 11 and 12 specified by actuation of the switch input section 24 etc.
[0024] The CD-ROM driver 30 is equipment which reads the data of CD-ROM32 inserted, and CD-ROM32 stores a game program, the screen data used in a game, the speech synthesis data used in a game, sound effect data, etc. In addition, it is possible to perform a game different from this example, preparing two or more CD-ROMs32, storing another game program in each, and using GPS information. The game program stored in CD-ROM32 is incorporated by the control section 27 through the CD-ROM driver 30, and is displayed on a display unit 23 if needed. CD-ROM32 constitutes a program store means.
[0025] A display unit 23 (display means) is constituted by the liquid crystal display (for example, LCD of a color), piles up the game information by which data processing was carried out by the control section 27, and the game information read from CD-ROM32 through the CD-ROM driver 30, and displays it on a screen. An audio output device 32 outputs a sound based on the signal and sound effect from which the control section 27 synthesized voice, and consists of a loudspeaker.
[0026] C. Explain the block configuration of game machines 11 and 12 to block style Shigeji of a game machine (an ally machine and hostile aircraft) with reference to drawing 3 . It is only that a part of game processings all differ, and since the fundamental configuration is the same, game machines 11 and 12 are explained on behalf of a game machine 11. In drawing 3 , a game machine 11 is constituted including the GPS antenna 41, the GPS receiving set 45, a communications antenna 42, a transmitter-receiver 46, a control section 47, ROM48 and RAM49, the CD-ROM driver 50, the switch input section 44, a display unit 43, and an audio output device (for example, loudspeaker) 51. The GPS antenna 21 receives the electric wave for positioning sent from a GPS Satellite, is the same structure as the referee machine 1, and is attached in the upper part of a game machine 11. Through the GPS antenna 21, the GPS receiving set (location detection

means) 45 receives the electric wave for positioning from two or more GPS Satellites, gets over, and outputs the currency information which computed and computed the currency information (for example, positioning information on the three dimensions containing the LAT, LONG, and altitude) of a game machine 11 based on the recovery signal to a control section 47.

[0027] The game machine 11 with which the current position is detected by the GPS receiving set 45 is equivalent to a mobile. In addition, those (namely, human being) who participate in a game treat a game machine 11. As a game machine 11, commercial portable navigation equipment, a game machine, a personal computer, etc. may be used (for example, the format of equipping with reconstruction or an optional equipment is sufficient), or it may be manufactured as a game machine 11 of dedication.

[0028] The information signal transmitted from the referee machine 1 and the ally machine 11 is received, or it is for communicating the information on transmitting required information to the referee machine 1 or the ally machine 11 from a game machine 11 etc., for example, an almost indirectional vertical antenna is used, and the communications antenna 42 is attached in the upper part of a game machine 11. It modulates the information sent from a control section 47 to the referee machine 1 and the ally machine 11, and transmits a signal to the referee machine 1 and the ally machine 11 through a communications antenna 42 while a transmitter-receiver 46 receives the signal from the referee machine 1 and the ally machine 11, gets over through a communications antenna 42 and outputs the information for a game to a control section 47.

[0029] While a control section 47 performs game processing according to the game program read from CD-ROM52 through the CD-ROM driver 50 Based on the currency information outputted from the GPS receiving set 45, perform control displayed on the screen of a display unit 43 corresponding to the game map data which read the current position of a game machine 11 from CD-ROM52 through the CD-ROM driver 50, or Based on the command information from the referee machine 1 received by the transmitter-receiver 46, advance of a game is controlled or control which displays the current position of each ally machine 11 on the screen of a display unit 43 similarly based on the positional information from two or more ally machines 11 received by the transmitter-receiver 46 is performed.

[0030] Moreover, while a control section 47 performs control (for example, expansion of a screen, modification of display area, etc.) which changes screen information of a display unit 43 while performing required setting processings (for example, reaction area: setup of the attack area (mine) which attacks an enemy etc.) based on the actuation signal of the switch input section 44, it synthesizes voice based on the voice data read from CD-ROM50, and outputs to an audio output device 51. A control section 47 is constituted by the microcomputer containing CPU, and performs the above-mentioned control according to the control program (refer to the below-mentioned flow chart) stored in ROM48. A control section 47 and the CD-ROM driver 50 constitute a control means. Moreover, a control section 47 constitutes a game change means and a reaction command means. The switch input section 44 and a control section 47 constitute an area setting means.

[0031] The switch input section 44 is constituted including the actuation key for performing game actuation (for example, setting actuation of a mine etc.), the modification key for changing the game map information displayed on the screen of a display unit 43, other power-source keys, etc. In addition, the area which can battle a

game machine is stored in CD-ROM52 beforehand driven with the CD-ROM driver 50, and assignment of the point on the battle area stored is attained by the coordinate.
[0032] ROM48 stores beforehand the various programs and the required data for the control of a game system performed by the control section 47. RAM49 has the memory area which stores the information which it is inputted from the switch input section 44, and must be memorized temporarily, and the memory area which stores temporarily the attack area information specified by actuation of the switch input section 44.
[0033] The CD-ROM driver 50 is equipment which reads the data of CD-ROM52 inserted, and CD-ROM52 stores a game program, the screen data used in a game, the speech synthesis data used in a game, sound effect data, etc. The game program stored in CD-ROM52 is incorporated by the control section 47 through the CD-ROM driver 50, and is displayed on a display unit 43 if needed. CD-ROM52 constitutes a program store means.
[0034] A display unit 43 (display means) is constituted by the liquid crystal display (for example, LCD of a color), piles up the game information by which data processing was carried out by the control section 47, and the game information read from CD-ROM52 through the CD-ROM driver 50, and displays it on a screen. An audio output device 51 outputs a sound based on the signal and sound effect from which the control section 47 synthesized voice, and consists of a loudspeaker.
[0035] D. Explain explanation of operation, next an operation.
D-1. Control program drawing 4 of a referee machine is a flow chart which shows the control program of the referee machine 1. ON of the power source of the referee machine 1 performs this program. If a power source turns on, the control program in ROM28 will start, the game program stored in CD-ROM32 through the CD-ROM driver 30 is read, and the following programs are performed according to the game program which read. In addition, battle data required for the game other than a game program, battle map data, etc. are stored in CD-ROM32, and such information is serially read if needed at the following steps.
[0036] Here, the beginners' class, the middle class, and an upper class are injured by the class, and the referee machine 1 can choose which class as the program of the battle game of this example. Moreover, although a mere battle game is sufficient as the name of a game program when the battle area as shown in drawing 7 is created so that it may agree in an actual area (for example, Yoyogi Park), for example, Yoyogi Park is made into a battle area, you may make it a game name like the "Yoyogi Park battle."
[0037] First, initial setting is performed at step S10. In initial setting, predetermined initialization processing of the clearance of the flag with which initial reset and game initiation were equipped, a setup of the work area of RAM29, etc. is performed. Moreover, in initial setting, measurement (for example, measurement of battle time amount sake) of time of day is also started. Subsequently, referee setting processing is performed at step S12. If the referee machine 1 does not set this up beforehand corresponding to the number of game machines, and a game, it sets up the information which is not and which is not. For example, they are the battle time of a game, a waging-war person's name (a false identifier and a handle are also possible), etc. Subsequently, a GPS signal (GPS electric wave) including the positional information transmitted from two or more GPS Satellites at step S14 is received, it asks for the three-dimensions positioning data (namely, the LAT, LONG, altitude) of the referee machine 1 based on

the received GPS signal, and the current position is computed. In addition, the current position of the referee machine 1 is not displayed on game machines 11 and 12.
[0038] Subsequently, communications processing with game machines 11 and 12 is performed at step S16. This receives those currency information from each game machines 11 and 12, or transmits required information according to game advance of each game machines 11 and 12. Subsequently, game expansion display processing is performed at step S18. displaying the current position of each game machines 11 and 12 on a battle map, or displaying mine area, the score point, etc. by this, **** -- etc. -- a display (display of a referee machine screen as shown in below-mentioned drawing 7) which expansion of a game understands at a glance is performed. [displaying a battle map on a display unit 23] At this time, it is on game expansion and the output of a required sound effect and a speech synthesis sound is also performed.
[0039] Subsequently, game machines 11 and 12 distinguish whether it passed through battle area at step S20. Battle area is a zone equivalent to the score of game machines 11 and 12 having changed and the battle having been performed, and the case of only receiving a mere alarm tone is not included (when a score does not change). There is mine area including score area and the specific area which carries out death from explosion including the score point which is on a battle map as shown in drawing 7 among the battle area. There is the score point with which the score of ten points, 20 points, 30 points, -ten points, and -20 points is added (however, -ten points and -20 points a parenchyma top demerit mark) in score area. In this example, although the score point is constituted as one area, it has two or more kinds of area where for example, not only this but setting area differs, and a score different, respectively may be made to be added in two or more kinds of area. For example, when the score area which has the area of the class of two size is set up, in inside area, you may carry out as [add / five points] in the area of ten points and an outside.
[0040] And in the case of the score area of this example, a score is not added, but the score contiguity area reacted to being close to the score point is prepared, and if game machines 11 and 12 go into score contiguity area, a predetermined score reaction sound will be emitted. A score reaction sound is a sound effect (it is made to differ from the below-mentioned mine beep sound) called PUPPUTSU, and it is made for a sound cycle to become short as the score point is approached. In addition, although it recognizes that game machines 11 and 12 have the near score point with a score reaction sound, with + point, decision whether since it does not restrict but there is also a - point, it approaches more is important, and, as for the score point, decision at this point is not necessarily interesting on the game.

[0041] On the other hand, mine area is constituted by the specific area B0 (mine point) by the side of the innermost, the 1st outside mine area B1 of the circumference of it, and the pan by three kinds of area of 2nd outside mine area B-2 of the circumference of it, as shown in drawing 6 . If 2nd outside mine area B-2 is passed, while death from explosion will be carried out if game machines 11 and 12 pass through the specific area B0 (mine point), it will receive a heavy predetermined damage (damage: -five points add) if it passes through the surrounding 1st outside mine area B1 of specific area (mine point), and receiving a light predetermined damage (damage: -one point adds), a mine beep sound occurs. A mine beep sound is a sound effect called PIPPITSU, and it is made for a

sound cycle to become short as the mine point B0 is approached.
[0042] In addition, mine area is constituted from two or more multiplex area other than three layer instead of the multiplex area of three layers as shown in drawing 6 , and you may make it the effectiveness of each area differ. Moreover, the configuration of area may not be circularly near, either and may be other configurations. The gained point of the game machines 11 and 12 at the start time is 20 points, and if game machines 11 and 12 pass the score point, the score of the game machine concerned will be added to a gained point. If game machines 11 and 12 do not pass through battle area at step S20, it branches to step S28 and processing battle area outside is performed.
[0043] In processing battle area outside of step S28, game machines 11 and 12 are the cases where the point relevant to the score on a battle map is not passed, and process by dividing into the following modes.
** When the passage root of game machines 11 and 12 is distant from either score area and score contiguity area or mine area (B0 - B-2 are included), in this case, without emitting the above-mentioned mine beep sound or a score reaction sound, return to step S14 and repeat the above-mentioned processing loop formation.
** When the passage root of game machines 11 and 12 is contained in score contiguity area, the game machines 11 and 12 which emit a score reaction sound and correspond sense having gone into score contiguity area with the referee machine 1 in this case. Then, it returns to step S14 and the above-mentioned processing loop formation is repeated.
[0044] It distinguishes whether the battle area through which it progressed and passed to step S22 at step S20 at the time of YES (namely, when game machines 11 and 12 pass through battle area) is mine area (the mine point B0 accompanied by death from explosion, and B1 of others and B-2 are also included). If the battle area through which it passed is mine area, it will progress to step S24 and multiplex area decision processing will be performed. This judges through which area of the mine area (are they the mine point B0 accompanied by death from explosion or B1 of others, and B-2?) game machines 11 and 12 passed. And the multiplex area effectiveness processing is performed by through which area of the mine area it passed at continuing step S26. The following processings are performed in the multiplex area effectiveness processing.
[0045] ** Sense that the light predetermined damage (damage) was given to the game machine when game machines 11 and 12 passed 2nd outside mine area B-2, -one point was added to the game machine concerned, and the mine beep sound occurred with the referee machine 1. The processing to which a light damage (damage) is given to and -one point is added is equivalent to the effectiveness of 2nd outside mine area B-2.
[0046] ** When game machines 11 and 12 pass through the 1st outside mine area B1, a heavy predetermined damage (damage) is given, and sense that -five points were added to the game machine concerned with the referee machine 1. The processing to which a heavy damage (damage) is given to and -five points are added is equivalent to the effectiveness of the 1st outside mine area B1. In addition, it can be continued by not death from explosion but the game even if it is a heavy damage (damage).
[0047] ** When game machines 11 and 12 pass the mine point B0, perform death-from-explosion processing of the game machines 11 and 12 concerned. The processing which carries out death from explosion is equivalent to the effectiveness of the mine point B0. Thereby, death from explosion (a gained point also turns into zero point) of the game

machines 11 and 12 which passed the mine is carried out, and, as for future game continuations, they become impossible. In the referee machine 1, advance of the game machines 11 and 12 with which after death from explosion tends to advance is stopped, and processing which warns is performed. Moreover, a restart command is outputted to the game machines 11 and 12 which carried out death from explosion. By this, the electric-wave signal of a restart command will be outputted to the game machines 11 and 12 which correspond through a communications antenna 22 from a transmitter-receiver 26, and will be displayed on the display unit 43 of game machines 11 and 12. If it passes through step S26, it will return to step S14 and the above-mentioned processing loop formation will be repeated. In addition, as reaction area set up by the area setting means, the area of one point consists of multiplex area, and the mine point B0, the 1st outside mine area B1, and 2nd outside mine area B-2 are equivalent to that from which the effectiveness in each area differs. A reaction command means will react, if game equipment goes into multiplex area, and the processing by the mine point B0, the 1st outside mine area B1, and 2nd outside mine area B-2 is equivalent to the processing which orders it the information (for example, display to a display unit 23) of a count (for example, addition of -one point), or a display corresponding to each area. The same is said of score area. The magnitude of multiplex area is decided with the magnitude of a setup of reaction area (for example, class of mine). For example, as for what has the large power of a mine, the path of the mine point B0, the 1st outside mine area B1, and 2nd outside mine area B-2 becomes large.

[0048] On the other hand, if the battle area through which it passed at step S22 is not mine area, it will progress to step S30 and score processing of the game machines 11 and 12 concerned will be performed. Thereby, the gained point of the game machines 11 and 12 which passed through score area is added according to the class (for example, any of ten points, 20 points, 30 points, -ten points, and -20 points are they, for example?) of score area. Subsequently, it distinguishes whether it is gall arrival at step S32, and if it is not gall arrival, it will return to step S14 and the above-mentioned processing loop formation will be repeated. And if which game machines 11 and 12 reach gall in an enemy and the battle game divided into the ally, processing which displays the sum total score of the game machines 11 and 12 which reached gall at step S34 will be performed, and it will progress to step S36. Thereby, the sum total score of the game machines 11 and 12 which reached gall is displayed on a display unit 23. Moreover, the battle time amount of the game machines 11 and 12 which reached gall is also displayed. The game machines 11 and 12 which ****(ed), for example, reached gall by the shortest battle time amount rank 1st. When game machines 11 and 12 have not reached gall, step S34 is jumped and it progresses to step S36.

[0049] At step S36, in distinguishing whether a game is ended or not and not ending a game, it returns to step S14, the above-mentioned processing loop formation is repeated, and it continues a game. On the other hand, when it decides that a game is ended by decision of the referee machine 1 by the case where there is a game machine which carries out death from explosion, and does not abandon and carry out the restart of the game etc. when all the game machines 11 and 12 make a goal or, it progresses to step S38, a game post process is performed, and this program is ended. while the message of "game termination" (game over may be used) is displayed, for example on each game machines 11 and 12 or a speech synthesis sound reports in a game post process -- leaving

this game progress and results by record **** -- etc. -- it processes.
[0050] In addition, when the weather ends a game reluctantly with severe rain, for example, even if all the game machines 11 and 12 do not make a goal, the step of game termination decision and a game post process may be inserted in the middle of the program instead of the location of step S38 so that it can respond, when it decides that a game is ended by decision of the referee machine 1 by the case where a game is ended on the way etc. thus -- that the game machines 11 and 12 which supervised action of each game machines 11 and 12 in the referee machine 1 (monitor), and passed the mine point B0 of mine area emit warning of a restart to a ********** case, or display the score of game machines 11 and 12 on a start point **** -- etc. -- the whole game until six sets of game machines 11 and 12 participate in a game and they reach gall (or death from explosion) is generalized, and a fair referee judgment is made.
[0051] D-2. Control program drawing 5 of a game machine is a flow chart which shows the control program of game machines 11 and 12. ON of the power source of game machines 11 and 12 performs this program. If a power source turns on, the control program in ROM48 will start, the game program stored in CD-ROM52 through the CD-ROM driver 50 is read, and the following programs are performed according to the game program which read. Battle data required for the game other than a game program, battle map data, etc. are stored in CD-ROM52, and such information is serially read if needed at the following steps. In addition, the following explanation explains among game machines 11 and 12 taking the case of the case of a self-machine (namely, ally machine). Since a position is different also in the case of a hostile aircraft, but the contents of step processing are the same, it omits.
[0052] First, initial setting is performed at step S50. In initial setting, predetermined initialization processing of the clearance of the flag with which initial reset and game initiation were equipped, a setup of the work area of RAM49, etc. is performed. Moreover, in initial setting, measurement (for example, measurement of battle time amount sake) of time of day is also started. Subsequently, area setting processing is performed at step S52. This sets up where the mine area (for example, the mine point B0 and the 1st outside mine area B1, 2nd outside mine area B-2) for attacking an enemy is laid underground. Although it is transmitted to another ally machine by the communications processing (step S56) of the ally machines which are the allies of a self-machine and the laying-under-the-ground location of the set-up mine area is displayed on the screen of an ally machine (namely, attacking the enemy concerned if an enemy goes into the mine area for attacking an ally an enemy's invasion condition display), it is not displayed on the screen of a hostile aircraft.
[0053] Subsequently, a GPS signal (GPS electric wave) including the positional information transmitted from two or more GPS Satellites at step S54 is received, it asks for the three-dimensions positioning data (namely, the LAT, LONG, altitude) of the self-machine (game machine 11) concerned based on the received GPS signal, and the current position is computed. In addition, although the current position is detected, respectively and, as for those current positions, all are displayed on the referee machine 1 in game machines 11 and 12, the current position of an ally machine is displayed on ally machines, and is not displayed on a hostile aircraft.
[0054] Subsequently, communications processing with an ally machine and the referee machine 1 (henceforth an ally machine etc.) is performed at step S56. This receives the

currency information of an ally machine, or performs transmission/reception of required information between the referee machines 1 according to game advance. Subsequently, game expansion display processing is performed at step S58. displaying the current position of a self-machine and an ally machine on a battle map, or displaying mine area, score area, etc. by this, **** -- etc. -- a display (display of a self-machine screen as shown in below-mentioned drawing 8) which expansion of a game understands at a glance is performed. [displaying a battle map on a display unit 43] At this time, it is on game expansion and the output of a required sound effect and a speech synthesis sound is also performed. In addition, the current position of a hostile aircraft is not displayed.
[0055] Subsequently, a self-machine distinguishes whether it passed through battle area at step S60. If a self-machine does not pass through battle area, it branches to step S68 and processing battle area outside is performed. Processing battle area outside is the case where the point on a battle map is not passed, and processes by a self-machine dividing into the following modes.
** When the passage root of a self-machine is distant from either score area and score contiguity area or mine area (B0 - B-2 are included), in this case, without emitting the above-mentioned mine beep sound or a score reaction sound, return to step S54 and repeat the above-mentioned processing loop formation.
[0056] ** When the passage root of a self-machine is contained in score contiguity area, while a self-machine displays having gone into score contiguity area on a display unit 43 in this case, output a score reaction sound from an audio output device 51. Thereby, the combatant (those who have participated in the game with the self-machine) of a self-machine can know that the passage root of a self-machine is contained in score contiguity area. In this case, a score reaction sound changes according to the proximity to the score point, and a score reaction sound becomes large, so that it is close to the score point. Therefore, the combatant of a self-machine can judge the distance to the score point by the score reaction loudness level. Then, it returns to step S54 and the above-mentioned processing loop formation is repeated.
[0057] The battle area through which it progressed and passed to step S62 at step S60 at the time of YES (namely, when a self-machine passes through battle area) distinguishes whether it is or not also (including the mine point B0 accompanied by death from explosion, and B1 of others and B-2). If the battle area through which it passed is mine area, it will progress to step S64 and multiplex area decision processing will be performed. This judges through which area of the mine area (are they the mine point B0 accompanied by death from explosion or B1 of others, and B-2?) the self-machine passed. And the multiplex area effectiveness processing is performed by through which area of the mine area it passed at continuing step S66. The following processings are performed in the multiplex area effectiveness processing.
[0058] ** When a self-machine passes 2nd outside mine area B-2, give a light predetermined damage (damage) to a self-machine, add -one point to the self-machine concerned, and generate a mine beep sound. The processing which gives a light damage (damage) and adds -one point is equivalent to the effectiveness of 2nd outside mine area B-2. A light damage (damage) and addition of -one point are displayed on a display unit 43. Moreover, a mine beep sound is outputted from an audio output device 51. Thereby, the combatant of a self-machine can know that the passage root of a self-machine is contained in 2nd outside mine area B-2. In this case, a mine beep sound changes

according to the proximity to the mine point B0, and a mine beep sound becomes large, so that it is close to the mine point B0. Therefore, the combatant of a self-machine can judge the distance to the mine point B0 in the magnitude of a mine beep sound. Then, it returns to step S54 and the above-mentioned processing loop formation is repeated.
[0059] ** When a self-machine passes through the 1st outside mine area B1, give a heavy predetermined damage (damage) to a self-machine, and add -five points to the self-machine concerned. The processing which gives a heavy damage (damage) and adds -five points is equivalent to the effectiveness of the 1st outside mine area B1. In addition, it can be continued by not death from explosion but the game even if it is a heavy damage (damage). A heavy damage (damage) and addition of -five points are displayed on a display unit 43. Thereby, the combatant of a self-machine can know that the passage root of a self-machine is contained in the 1st outside mine area B1. In this case, since it is close with the mine point B0, a heavier damage (damage) is received as compared with 2nd outside mine area B-2, and points lost (-five points) also become large. Therefore, looking out for approach on the mine point B0, the combatant of a self-machine will move and interest of a game increases. Then, it returns to step S54 and the above-mentioned processing loop formation is repeated.
[0060] ** When a self-machine passes the mine point B0, perform death-from-explosion processing of the self-machine concerned. The processing which carries out death from explosion is equivalent to the effectiveness of the mine point B0. The game continuation after carrying out death from explosion of the self-machine which passed the mine by this becomes impossible (although a gained point is set to 0 by death from explosion at this time, it is good as for -30 points in a gained point, for example). If a self-machine tends to run at this time even if it carries out death from explosion, warning will be performed from the referee machine 1. Moreover, in death-from-explosion processing, a shocking sound effect is outputted and a game is heaped up. Furthermore, when a self-machine passes the mine point B0, restart display processing is performed after death-from-explosion processing. Thereby, for the self-machine which carried out death from explosion to the display unit 43, it is the display (for example, death from explosion of the "mine was stepped on and carried out.) with the need to return to a start point and to carry out a restart. It returns to a start point and the display of the message carry out a restart" is performed. Moreover, the need for a restart is outputted by the speech synthesis sound. Furthermore, the electric-wave signal of a restart command is outputted also from the referee machine 1, and the request of a restart displays this electric-wave signal on a display unit 43 by receiving with a self-machine (for example, it is the command from "referee.). It returns to a start point and the display of the message carry out a restart" is performed. If it passes through step S66, it will return to step S54 and the above-mentioned processing loop formation will be repeated.
[0061] On the other hand, if the battle area through which it passed at step S62 is not mine area, it will progress to step S70 and score processing of a self-machine will be performed. Thereby, the gained point of the self-machine which passed through score area is added according to the class (for example, any of ten points, 20 points, 30 points, -ten points, and -20 points are they, for example?) of score area. Subsequently, it distinguishes whether it is gall arrival at step S72, and if it is not gall arrival, it will return to step S54 and the above-mentioned processing loop formation will be repeated. And if a self-machine reaches gall, it will perform processing which displays the sum total score

of the self-machine which reached gall at step S74, and will progress to step S76. Thereby, the sum total score of the self-machine which reached gall is displayed on a display unit 43. Moreover, when the self-machine has not reached gall, step S74 is jumped and it progresses to step S76.

[0062] Since the self-machine reached gall at step S76, processing which displays game expansion of other ally machines on a display unit 43 is performed. Thereby, the self-machine which reached gall can know the game expansion situation of an ally machine. Subsequently, if it distinguishes whether there is any command of game termination from the referee machine 1 at step S78 and there is no game termination command, it will return to step S76 and processing will be repeated. If there is a game termination command, it will progress to step S80, a game post process will be performed, and this program will be ended. By the game post process, while the message of "game termination" (game over may be used) is displayed, for example on an ally machine and a hostile aircraft, it is reported to a speech synthesis sound. Moreover, while this game progress and the results (they are the results, the score results according to individual, etc. the result of which should win between the ally or the enemy) in an ally machine and a hostile aircraft are recorded, it is displayed also on a display unit 43. Thus, the battle game which aimed at gall is performed in a self-machine, earning a score, setting up the mine area attacked in order to carry out death from explosion of the enemy, or looking at the trend of the battle root locus of self, or an ally machine on a display unit 43.

[0063] E. Explain the example of a battle game, next the example of a battle game. it is shown in the screen (display unit 23 is the same as that of a screen and the following) of the referee machine 1 at drawing 7 -- as -- the situation of a battle map, X army, and the battle team of the both sides of Y teams -- the advance root, battle area, and score area -- being involved -- etc. -- it corresponds and is displayed serially. The gained point of a start point is 20 points, and from here, X army and Y teams carry out the gall finger of it, and start it. In this case, it makes it precede to start and the referee machine 1 sets up score area (the range and a location are also set up). In addition, score area may be beforehand incorporated in the game program.

[0064] on the other hand, it is shown in the screen (display unit 43 is the same as that of a screen and the following) of game machines 11 and 12 at drawing 8 -- as -- the situation of the battle team of a battle map or an ally machine -- the advance root and battle area (for example, mine area) -- being involved -- etc. -- it corresponds and is displayed serially. In this case, in advance of a start, a self-machine sets up mine area first so that death from explosion of the enemy may be carried out with a mine. In mine area, it sets up where the mine point B0 and the 1st outside mine area B1, and 2nd outside mine area B-2 are laid underground, for example. Although the allies of the mine area which the ally machine set up are visible in the pictures, it is not visible to an enemy. Moreover, the score area which the referee machine 1 set up is not visible to game machines 11 and 12.

[0065] In the example of drawing 7 , the game machine 11 (for example, ally machine) with X army goes smoothly, and it adds to ten points, 30 points, and a gained point, and it becomes 60 points, a goal is made and the advance root is expressed as the locus. Since the conditions of gall are 40 or more points and this condition is fulfilled, as for the game machine 11 with X army, gall arrival is authorized. And the elapsed time to gall arrival is also measured and the decision of ranking is made. In addition, only with an early gained point, since the gained point in early stages of a start point is 20 points, even if it makes a

goal, it will not be recognized as gall arrival.
[0066] On the other hand, after it passes the score point of 12 (for example, hostile aircraft) to ten existing game machines of Y teams and a gained point decreases to ten points, subsequently the mine point B0 of mine area is passed bad [fate], and death from explosion is carried out here. Therefore, gall is not made but a restart command is taken out from the referee machine 1. Moreover, the need for a restart is displayed also on the screen of the existing game machine 12 of Y teams. In addition, although a restart is made, gall arrival is not authorized unless it makes a goal in predetermined time from battle initiation. Unless the restart command from the referee machine 1 is issued, by themselves, game machines 11 and 12 are made not to carry out a restart. Thus, on the screen of the referee machine 1, all the situations of X army and the battle team of the both sides of Y teams are supervised, and a referee is performed.
[0067] The example of drawing 8 shows the example of a display of a screen by using the game machine 11 (namely, ally machine) with X army as a self-machine. For example, X1 (self-machine) goes smoothly from a start point, and is added to ten points, 30 points, and a gained point, and when it becomes 60 points and a goal is made, the advance root is expressed as a locus. Although other ally machines (for example, X2) passed near the score area of -ten points from the start point at this time, it was not added with sufficient fate to a score, but it went on further, and mine area was approached. While touching 2nd outside mine area B-2 and hearing a mine beep sound exactly at this time, it is in the condition that the light damage (damage) was given and -one point was added. in addition, although 2nd outside mine area B-2 is illustrated with a circle on explanation at drawing 8 , no 2nd outside mine area B-2 (natural -- the mine point B0 and the 1st outside mine area B1) is expressed as an actual self-machine screen. Therefore, gall is not made yet.
[0068] Thus, in this example, while detecting the self current position based on the electric wave sent from a GPS Satellite, following the referee of the referee machine 1, in response to the same currency information, it displays on a screen also from an ally machine, and the battle game of aiming at gall arrival in piles is performed in a score, avoiding an enemy's attack. Therefore, the following effectiveness can be acquired.
(1) Unlike the former, it can come out to the outdoors, the body can be moved, a battle game can be performed, and a game can be enjoyed healthily.
(2) A battle game can be performed by two or more persons (for example, several persons), and humane contact can be raised.
[0069] (3) As compared with what performs a battle game or a fighting game by two conventional persons, beyond several person scale can perform a game and the battle game of this example can experience the pleasure of a game by a lot of people for it.
(4) Compared with the mannerism-ized inside-of-a-house game, the battle game of this example is new and can raise enjoyment.
(5) When performing the battle game in the outdoors, while it is easy, and checking one's location can make its location reflect in a game and it uses the body, the innovative game which is not in the former can be enjoyed.
[0070] (6) A oneself location detection result is taken in by the game, and since the advance condition of a game changes and carries out, the element which heaps up a field game can be raised.
(7) Since it will react if a partner's (for example, enemy) reaction area (for example,

mine) can be set up in a game, and the reaction area moreover is not displayed on a partner but a partner goes into reaction area (a beep sound is generated), a game participant can give change to the contents of a game, and can raise participating volition. Moreover, when performing a game repeatedly, a setup of reaction area can be variously changed in a next game, and a game can be enjoyed further.

[0071] in the battle game of this example, if it passes over fixed time amount in order to play a game interesting although the value of the score point in score area is fixed since the contents of a game become complicated on explanation, the mark of the score point will change -- it is good to make it like (for example, for the one score point to become low at a time whenever it goes through fixed time amount). Moreover, if it does not pass over predetermined time, the score area through which it passed once may be made to make the same game machine a different pointing point, when a score is made not to be added or it passes through the same score area to the 2nd.

[0072] F. Various kinds of following control may be performed with the game equipment of modification this invention.

- Constitute the area of one point from multiplex area (for example, mine area B0 and B1 of three layers like said example, B-2). When the game equipment of the ally which the effectiveness in each area differs and is in specific area (for example, mine point B0) entered and carries out death from explosion, It is made for the effectiveness of death from explosion to reach to the game equipment of other allies which are present in the multiplex area concerned, and may be made to perform processing which counts or (for example, addition of a minus score) displays the effectiveness (it displays on a display unit). For example, the effectiveness of the death from explosion to the game equipment of other allies which are present in multiplex area is the effectiveness which adds a damage further (as a sake [exhausting / accompanying the death from explosion of an ally / military power] - addition of three points). If it does in this way, it can come out by the sense of togetherness of an ally machine, and game expansion called consumption of ally military power can be carried out.

[0073] - Once reaction area reacts, you may make it include the area which does not re-react to game modification. For example, if game equipment enters and scores in the score area when there is score area like said example, the score will be made into the area which does not re-react until it changes a game (for example, carrying out game over a next game start), noting that the 2nd time is not added, since it already used up. A game can be played more interesting if it does in this way. Moreover, the area which does not re-react may be mine area.

- The re-reaction means for stopping it is made not to react even if game equipment will go into the set-up reaction area continuously, once reaction area reacts may be established. For example, if it reacts in the form where game equipment enters and carries out death from explosion to specific area (for example, mine point B0) when the mine area B0 and B1 of three layers and B-2 are set up, it will be made the area which does not react even if game equipment exploded [the mine] again and goes into the specific area continuously. If it does in this way, a game can be similarly performed with the feeling near an actual mine.

[0074] - It may be made to perform one area setup combining score area and mine area. For example, you may make it an area setup which obtains a score, incorporating score area intricately into mine area, and avoiding a mine. If it is made such, it is necessary to

obtain a score, avoiding the danger of a mine, and a game can be played interesting.
- Setting modification is possible for reaction area on condition that predetermined [, such as time amount,], and it is good to also make. For example, you may make it the contents of the effectiveness of score area or mine area change with a fixed time interval like 10 minutes and 20 minutes after game initiation. And points are so high that the time amount progress from game initiation is short, and it is made for points to become low, so that time amount passes and it becomes late. Moreover, if there is so little mine area that the time amount progress from game initiation is short and the time amount progress from game initiation becomes long, you may make it mine area appear mostly. That is, mine area will appear frequently suddenly in connection with the passage of time. If it is made such, the contents of a game will change on condition that predetermined [, such as time amount,], and it will become more interesting.
[0075] Various kinds of deformation implementation which is stated not only to the gestalt of the above operations but to the following is possible for the gestalt of operation of this invention.
(a) Although the battle area of the above-mentioned example is intelligible when it is creating so that it may agree in an actual area, for example, Yoyogi Park is made into a battle area, and it is made into a game name like Yoyogi Park battle", it is made names, such as not only an area but a "supernatural creature battle", a "preparatory school student battle", "a ** battle of Honno-ji", etc., in this case, and may be made to perform a battle game. It is interesting when what was imitated in Nobunaga, Mitsuhide, etc. will be made to appear in KYARATA which gets in that case in score area, if it is "the ** battle of Honno-ji."
(b) About application of this invention, people may carry a game machine and it may participate, or loading etc. may be carried out to a mobile and it may participate in it. A mobile may not be restricted to a car and vehicles, such as a bicycle, an airplane, vessels (a boat, yacht, etc.), a motorcycle, and hang RANDA, are sufficient as it. Furthermore, if broad application is considered, it may apply also to a battle car and a battle simulation may be performed.
[0076] (c) Although CD-ROM is used in the above-mentioned example as a program store means, not only this but various kinds of storages can be used. For example, a magneto-optic disk, a DVD disk, a magnetic tape, a mini disc, etc. may be used. Or a storage like an IC card and an optical card may be used.
(d) The participant itself creates the setting information on a referee machine or a game machine (for example, laying-under-the-ground location of a mine etc.) using the personal computer, stores it in the floppy disk etc., and may be made to make it read into a referee machine or a game machine beforehand at the time of game initiation for example. If it is made such, a setup at the time of game initiation is easy.
[0077]
[Effect of the Invention]
According to invention according to claim 1, by the contents of a game displayed on a display means (for example, display unit) (1) Game equipment While performing control which associates and displays the location (for example, self current position detected based on the electric wave sent from a GPS Satellite) of (a self-machine [for example,]) and changing advance of a game according to the location of game equipment The reaction area (for example, mine) reacted to game equipment (for example, hostile

aircraft) is set up. While reaction area will react if it has two or more kinds of area where setting area differs, the effectiveness that each differs is produced and game equipment (for example, hostile aircraft) goes into reaction area, and effectiveness produces it Since he is trying to order it the information (for example, mine beep sound) of a predetermined reaction condition, the following effectiveness can be acquired. Unlike the former, it can come out to the outdoors, the body can be moved, a game (for example, battle game) can be performed, and a game can be enjoyed healthily. A game can be performed by two or more persons (for example, several persons), and humane contact can be raised. As compared with what performs a battle game or a fighting game by two conventional persons, beyond several person scale can perform a game and the game system of this invention can experience the pleasure of a game by a lot of people for it.

[0078] Compared with the mannerism-ized inside-of-a-house game, the game system of this invention is new and can raise enjoyment. When performing the game in the outdoors, while it is easy, and checking one's location can make its location reflect in a game and it uses the body, the innovative game which is not in the former can be enjoyed. Since it will react if a partner's (for example, enemy) reaction area (for example, mine) can be set up in a game, and the reaction area moreover is not displayed on a partner but a partner goes into reaction area (death from explosion or a beep sound is generated), a game participant can give change to the contents of a game, and can raise participating volition. Moreover, when performing a game repeatedly, a setup of reaction area can be variously changed in a next game, and a game can be enjoyed further.

[0079] (2) Since a location detection means is GPS equipment which receives the electric wave for positioning from a GPS Satellite, and measures the current position of game equipment according to invention according to claim 2, the game which used the GPS equipment which has spread in recent years can be made and enjoyed. Moreover, the current position (for example, self-location detection result) of game equipment is taken in by the game with GPS equipment, and since the advance condition of a game changes and carries out, the element which heaps up especially the game in the outdoors can be raised.

[0080] According to invention according to claim 3, two or more groups divide and play a match against an enemy and an ally, and the attack area (for example, mine) which attacks an enemy with an area setting means is set up. (3) A reaction command means By attacking the enemy concerned and ordering an ally the display of an enemy's invasion condition, if an enemy goes into the set-up attack area While especially the location of game equipment is reflected in a game, and the participant itself can set up attack area and the participating volition to a game increases, a game can be played very interesting by elaborating a setup of attack area.

[0081] (4) While according to invention according to claim 4 two or more groups are divided into an enemy and an ally with game equipment and are pitched against each other The referee equipment (for example, referee machine) which supervises a waging-war situation is formed. Referee equipment By having a referee means to perform referee processing of waging war, action of each game equipment is supervised with referee equipment (monitor). To a ********** case, the game equipment which passed through reaction area (for example, mine) emits warning of a restart, or at a start point displaying the score of game equipment **** -- etc. -- all game equipments participate in a game, and a game is won (gall is reached), or it loses (for example, death from explosion) --

generalizing the whole game until it carries out, a fair referee judgment can be made and a game can be performed happily.

[0082] (5) According to invention according to claim 5, the reaction area set up by the area setting means It is that from which the area of one point consists of multiplex area, and the effectiveness in each area differs. A reaction command means Will react, if game equipment goes into multiplex area, and corresponding to each area, it is ordered the information of a count or a display. A game can be played more interesting by reaction area by effectiveness's reaching to the game equipment which is present in the multiplex area concerned, when game equipment goes into specific area, and performing processing which counts or displays the effectiveness.

[0083] (6) According to invention according to claim 6, the reaction area set up by the area setting means can play a game more interesting by including the area which does not re-react to game modification, once it reacts. Especially, when reaction area is mine area, a game can be performed with the feeling near an actual mine.

[0084] (7) According to invention according to claim 7, on condition that predetermined [, such as time amount,], the contents of a game can change on condition that predetermined [, such as time amount,], and reaction area set up by the area setting means can be made more interesting according to setting modification being possible.

[0085] (8) Once it reacts to the reaction area set up by the area setting means according to invention according to claim 8, the contents of a game can be made more interesting by having the re-reaction means for stopping it is made not to react even if game equipment goes into the reaction area continuously.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing showing the appearance configuration of the referee machine which realizes one example of the game system concerning this invention, a hostile aircraft, and an ally machine.

[Drawing 2] It is drawing showing the block configuration of a referee machine.

[Drawing 3] It is drawing showing the block configuration of a game machine.

[Drawing 4] It is the flow chart which shows the control program of a referee machine.

[Drawing 5] It is the flow chart which shows the control program of a game machine.

[Drawing 6] It is drawing explaining the setting area of a mine.

[Drawing 7] It is drawing explaining the display screen of a referee machine.

[Drawing 8] It is drawing explaining the display screen of a game machine.

[Description of Notations]

1 Referee Machine (Referee Equipment)

11, 11a-11c Ally machine (game equipment)

12, 12a-12c Hostile aircraft (game equipment)

23 43 Display unit (display means)

24 44 Switch input section

25 45 GPS receiving set (location detection means)

26 46 Transmitter-receiver
27 Control Section (Game Change Means, Reaction Command Means, Referee Means)
30 50 CD-ROM driver
32 52 CD-ROM (program store means)
31 51 Audio output device
47 Control Section (Game Change Means, Reaction Command Means)

[Translation done.]